

REMARKS

Claims 1 – 26 are currently pending in the instant application. Applicants note with appreciation that the Examiner allowed claims 17 – 26. However, the Examiner has rejected claims 1 – 2 and 9 – 16 and has objected to claims 3 – 8 as being allowable but for their dependence on a rejected base claim. In this response, Applicants provide arguments rebutting the current rejections.

The Examiner rejected claims 1 – 2 and 12 – 16 under §103 as unpatentable over U.S. Patent No. 6,567,653 to Sanders in view of U.S. Patent No. 5,748,678 to Valentine et al., herein referred to as Valentine. In support of this rejection, the Examiner asserts that Sanders teaches the modulator and amplifier of independent claim 1. While the Examiner concedes that Sanders fails to teach the phase compensator, the Examiner asserts that Valentine corrects this defect.

Independent claim 1 claims, *inter alia*, an amplifier “having at least first and second operating modes” and “a phase compensator to selectively impart a compensating phase shift to said at least one baseband information signal to offset an expected phase shift imparted to said transmit signal by said amplifier when operating in said second mode” (emphasis added). In other words, the phase compensator of claim 1 selectively applies a predefined phase shift to a baseband information signal when a multi-mode amplifier is operating in a second mode to cancel the expected phase effects associated with the second mode of the amplifier. For example, assume that an amplifier includes two amplification stages, each stage imparting a given phase shift to the transmit signal. In a first mode, the signal is amplified by the first stage, and in the second mode, the signal is amplified by both stages. According to the present invention, a phase compensator selectively applies offsetting phase compensation to the baseband information signal to be transmitted to account for the extra phase shift added by the activation of the second amplifier stage. That is, the phase compensator of claim 1 adds an offsetting amount of phase to cancel the expected additional phase shift imparted by activation of the second amplifier stage.

Contrastingly, Valentine describes a transmitter that includes a pre-distortion circuit that pre-distorts a baseband information signals to compensate for conventional distortion introduced by a transmitter chain. As explained in the background of Valentine, this distortion is caused by the transmitter chain's response to the varying amplitude and phase of the baseband information signal. In other words, Valentine's pre-distortion circuit is driven by tracking amplitude and phase values of the signal to be transmitted, and not by any changing selections of amplifier mode as claimed in the instant application.

Contrary to the Examiner's assertions, there is nothing in Valentine to teach or suggest an amplifier with multiple operating modes as claimed in claim 1. Further, there is nothing in Valentine to teach or suggest applying an offset phase shift to the baseband information signal in response to a particular operating mode of the amplifier to compensate for a phase shift introduced by the operating mode of the amplifier. Instead, Valentine simply teaches a pre-distortion circuit that compensates for transmitter chain distortion based on the information signal applied to the amplifier. Because Valentine does not teach or suggest the phase compensator claimed in claim 1, Valentine does not correct the deficiencies of Sanders. As such, independent claim 1 is patentably distinct from the combination of Sanders with Valentine. Applicants respectfully request reconsideration.

Because claims 2 – 16 depend, directly or indirectly, from claim 1, dependent claims 2 – 26 are also patentably distinct. Applicants respectfully request reconsideration and allowance of claims 1 – 16.

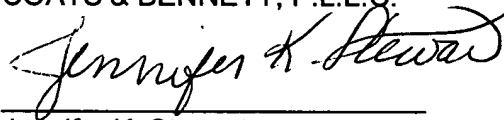
Further, the Examiner rejected claims 9 – 11 under §103 as unpatentable over Sanders in view of Valentine, and further in view of U.S. Patent 5,150,072 to Malec. First, it will be appreciated that the rejection of dependent claims 9 – 11 is rendered moot due to the allowability of independent claim 1 in light of the above arguments. Further, Applicants note that the obviousness rejection fails as a matter of law because the combination of Sanders with Valentine does not disclose what the Examiner alleges it does. As discussed above, neither

Sanders nor Valentine, alone or in combination, includes a phase compensator for compensating phase shifts in response to a particular operating mode of the amplifier. Because Malec does not correct the deficiencies of Sanders and/or Valentine, claims 9 – 11 are patentably distinct over the cited art. Applicants respectfully request reconsideration.

In light of the above arguments, Applicants submit that claims 1 – 16 are allowable. Further, Applicants note that in the current office action, the Examiner allows claims 17 – 26. Therefore, Applicants submit that claims 1 – 26 stand in condition for allowance. As a result, Applicants respectfully request the Examiner reconsider the rejections and allow the application to move forward to allowance. If any issues remain unresolved, Applicants request that the Examiner call the undersigned so that any such issues may be expeditiously resolved.

Respectfully submitted,

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